

### Abstract

A method of fabricating a dental restoration comprising providing a framework possessing a coefficient of thermal expansion of as high as about  $18 \times 10^{-6}/^{\circ}\text{C}$ ; and using a dental porcelain composition comprising a leucite crystallite phase dispersed in a feldspathic glass matrix to the framework to provide a smooth, non-abrasive surface thereon, wherein the fused dental porcelain composition having a maturing temperature in the range from about  $750^{\circ}$  to about  $1050^{\circ}\text{C}$ ., a coefficient of thermal expansion (room temperature to  $450^{\circ}\text{C}$ .) of from about  $12 \times 10^{-6}/^{\circ}\text{C}$ . to about  $17.5 \times 10^{-6}/^{\circ}\text{C}$ ., and comprising:

Component	Amount (wt. %)
$\text{SiO}_2$	57-66
$\text{Al}_2\text{O}_3$	7-15
$\text{K}_2\text{O}$	7-15
$\text{Na}_2\text{O}$	7-12
$\text{Li}_2\text{O}$	0.5-3

and further comprising a dispersed leucite crystallite phase representing from about 5 to about 65 weight percent of the dental porcelain, and wherein the leucite crystallites possess diameters not exceeding about 10 microns.